GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated under the Federal law as a non-commercial institution for the increase of geographic knowledge and its popular diffusion.)

General Headquarters, Washington, D. C.

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THE YOUNG WELSHMAN TAKING A LESSON IN CORACLE NAVIGATION

Until a boy has become proficient in handling this ancient craft of Wales, he is tied to it with a rope, so that if the boat turns turtle he can hang on to it until help comes (see Bulletin No. 5).

HOW TO OBTAIN THE BULLETIN

The Geographic News Bulletin is published weekly throughout the school year (thirty issues) and will be mailed to teachers for one year upon receipt of 25 cents (in stamps or money order). Entered as second-class matter, January 27, 1922, at the Post Office at Washington, D. C., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized February 9, 1922.

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The Danube: Which Provides Europe With a Delta Problem

THE COMMISSION named by the League of Nations to direct a survey of navigation conditions on the Rhine and the Danube probably will find a considerable portion of its task on the Danube at its mouth. Here the river presents most of the conditions and many of the difficulties typical of the Mississippi.

After sprawling in a great angle around the barrier of Dobrudja the so-called blue Danube drops its load of mud and sand gathered from eight nations of Europe in a large delta at the western end of the Black Sea. This delta takes the form of a huge triangle fifty miles long on each side. The northern border is the Kilia branch, the south, the St. Georges branch, while on the east is the Black Sea shore. The two main branches of the Danube are subdivided many times in their never-ending impossible task of trying to make land and flow over it at the same time.

A Two Year Job That Does Not End

Bisecting the delta triangle is the Sulina branch of the Danube which receives practically all of the shipping trade, since a deep channel to the upper river is maintained through it by the concerted action of the governments of Europe. The Treaty of Paris of 1856 created the European Commission of the Danube and ordered it to make the mouths of the great river open to navigation within two years. Evidence of how little the diplomats knew of the engineering problems involved in making a huge river serve mankind is shown by the fact that the Commission not only worked two years but is still at work.

Of all the varieties of earth surface, deltas are least admired. Poets go to the mountains for their inspiration, travelers heed the lure of deserts, but few people go to a delta, even to hunt ducks, if they can help it. The Danube's delta is particularly unattractive since the peasants have not been able to adapt it to agriculture as sugar cane planters have done with large tracts of the Mississippi delta. Some deltas, such as those of the Amazon and the Yangzte, consist of large islands surrounded by considerable water, but the Danube's waters run through a vast swamp which was almost a complete barrier to navigation before the European Commission of the Danube took a hand.

Pan's Pipes Have Many Uses

In country that is neither land nor water the reeds and willows take command. Deprived of timber the peasant fisherman put the reeds to many uses. Willows are used for basket-making and for fish weirs. A plumed reed is cut for fuel and still another kind is woven into mats or used as thatch. Inhabitants of the Danube delta are mostly Russian fishermen. Those who are irritated at fishing restrictions in the United States can appreciate what a fisherman's paradise they live in by comparison. The Rumanian Government considers fishing a government monopoly and every commercial catch must be brought to a government customs house to be auctioned off.

By the construction of levees and wiers, the European Commission of the Danube has opened a channel to Galatz, the Rumanian naval port, capable of

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THE SACRED WOLF OF ROME IN BUCHAREST

Bessarabia, the border province between Rumania and Russia, is said to contain a majority of Rumanians. Although the stock is a composite of the numerous tribes which used the plains as pathways of advance, Rumanians are proud of their Roman heritage. The legendary wolf is supposed to have mothered the twin brothers Romulus and Remus, founders of Rome (see Bulletin No. 3).

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Food Fish That Roll Their Eyes

NATURE probably has given more evidences of peculiar adaption to conditions among the living things of the sea than living things of the land if we are to believe fish stories—and facts.

Stranger than fiction are the fish with migrating eyes, the flatfish which are so important to the great North Atlantic fisheries. Eye-rolling among the flounders and halibuts is described in a chapter by John Oliver La Gorce on fishes and fisheries of the North Atlantic Seaboard in "The Book of Fishes," recently published by The National Geographic Society.

"When they are hatched," Mr. La Gorce writes, "all flatfish are of orthodox symmetrical shape, with conventionally placed mouths and eyes, but after they swim around in ordinary fashion for a little while, they exhibit a tendency to turn to the one side or the other.

Roll to Right in Cold Water

"By what strange quirk of Nature the left eyes of species inhabiting cold water usually migrate to the right side of their heads, while the right eyes of most species inhabiting warm water journey over to the left, no scientist will venture a guess.

"The first sign of the transformation is a rapid change in the cartilage bar lying in the path of the eye that is to migrate. Then comes an increase of the distance between the eye and the brain, caused by the growth of facial cartilages. In the winter flounder, three-fourths of the 120 degree migration takes place in three days. What if that should become a human habit?

"How this deviation from the conventional bilateral shape arose is a mystery. Whether there came a "sport" in the family tree at some stage of its history or whether the deviation grew from a gradual modification of the adults, cannot be said. Flatfish after passing the larval stage live on the bottom, where their shape and color camouflage them and give them opportunity to catch their prey."

Wealth of Fish Life

The marvelous variety of fish life in American streams is related in the same book by Charles H. Townsend in a chapter "Our Heritage of the Fresh Waters."

"The United States has a smaller area than Europe," Dr. Townsend points out, "yet it has nearly five times as many kinds of freshwater fishes. We have about 585 species, while Europe has but 126 species.

"We find that a single State may have considerably more than 100, the number known to Illinois being 150, while New York is credited with 141."

On the issue of the most valuable fish in America, Dr. Hugh M. Smith, former United States Commissioner of Fisheries, decides for the Pacific salmon.

"There are five distinct species of salmon," he writes, "which, having many characters in common, nevertheless differ strikingly in size, color, habits, distribution, food value, and economic importance. All of the species occur on the California coast to San Francisco or a little farther south, and range thence to the far north, crossing to Siberia and reaching southward into Kamchatka, while three of them extend to Japan.

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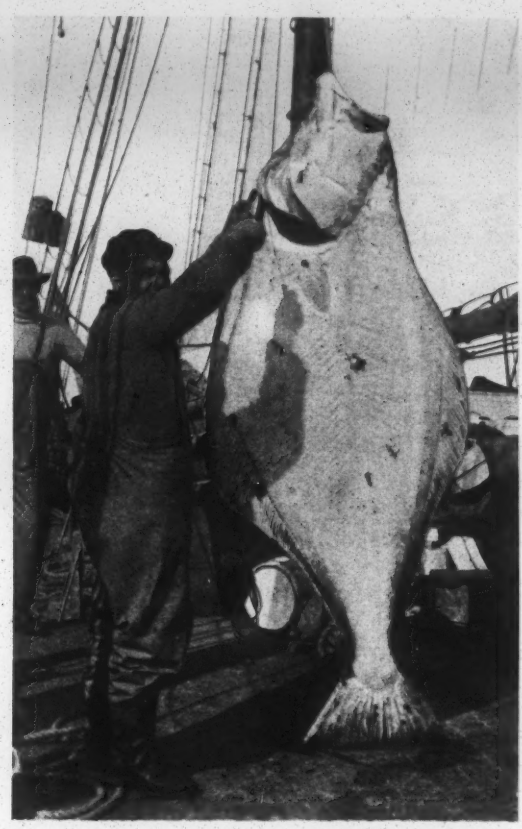
receiving shipping up to 4,000 tons. The traffic in and out of the river amounts to more than 5,000,000 tons annually. By this route Rumania, fifth nation in petroleum production, sends out much of her oil to the world. From the loess plains of Bessarabia and southeast Rumania, continuations of the Black Earth belt of Russia, come tons of cereals and even Indian corn, which is a staple Rumanian product.

Drains Basin One-fourth That of the Mississippi

Before the Sulina Channel was made products were brought to the sea in lighters and put aboard ships waiting in the open roadstead. Once a heavy storm arose and dashed 24 sailing vessels and many lighters on shore with the loss of 300 lives. Such a disaster now is impossible.

The Danube rises in the Alps and flows 1,750 miles to reach the Black Sea, breaking through the Carpathian Mountains at the Iron Gate, which is the Culebra Cut of the Balkans. It is about 750 miles shorter than the Mississippi, and although it drains a great part of Europe outside of Russia, the Danube basin is only one-fourth the size of the Mississippi basin. The flow is about one-fourth of that of the Mississippi. The Nile, like the Danube, has many mouths, a recent map showing eleven. The Mississippi once divided into many sizable streams to reach the Gulf, but engineers have succeeded in guiding most of its force into a single channel.



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GULF OF ST. LAWRENCE HALIBUT WEIGHING ABOUT 300 POUNDS

(See Bulletin No. 2).

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Bessarabia, a "Bread Basket" of Europe

BESSARABIA will be affected by the embargo laid down by Rumania against the exportation of wheat out of her borders. Bessarabia, which has been a bone of contention between Russia and Rumania, is one of the principle "bread baskets" of Europe.

Only a close observer can tell the difference between rural Ohio and Indiana and the farm lands of Bessarabia. Tasseled Indian corn, from seed brought from America, rustles in the breeze while ripples play over seas of yellow wheat. Earth black as Illinois "gumbo" lies beneath one's feet.

When land like this brings from $200 to $400 an acre in the United States, it is clear why both Russia and Rumania have been extremely concerned over the possession of this province.

Geologically Bessarabia is allied to Russia, including as it does the tail end of the black earth belt of Russian prairies. But even Russian census figures state that more than half Bessarabia's population is Rumanian.

Named for House of Bassarab

In feudal days there arose in what now is Rumania, the house of Bassarab. One of the princes is said to have established Moldavia, which, with Wallachia, established by another prince of the same house, helped make up pre-war Rumania. Bessarabia takes its name from the family. This point of history was not forgotten in Rumania's "irridenta" program. Russia reminded the world that Bessarabia had been a Russian principality for more than a hundred years, up to the transfer during the days of the Revolution, and that it is a monument to Russia's power in stemming the Turk tide in the Balkans.

Rumania, variously considered, is 1,800 years old, 65 years old, or 6 years old. Bessarabia was the outpost of the Roman dominion, Dacia, which, in the time of Trajan comprised all of what now is Greater Rumania. Only Wallachia and Moldavia were included in the familiar Rumanian "boot" which made up the autonomous Rumania carved out of Turkey in Europe, in 1859. Independent Greater Rumania, 6 years old, was born when the Versailles treaty reallotted Transylvania and Bukowina. Bessarabia was annexed after repeated requests from that principality's peasant council, which first attempted to establish a republic.

Three Ages of Rumania

Rumania's three ages are the key to the condition of Bessarabia, which has the air of being part of one of the oldest nations of Europe and yet bears the marks of the green pioneer stage of Nebraska in overland mail days. Like the American pioneer, the Bessarabian peasant is sufficient unto himself. He builds his own house from materials at hand, his fields supply wheat and corn, his stock supplies his meat and his flax the fiber which his wife and daughters spin, weave and dye. Only recently have aniline dyes replaced natural herb dyes for the brilliant peasant costumes. Independence is a necessary virtue in a country which has only 530 miles of railroad and only 60 miles of improved highway!

The household obeys the pioneer rule that everybody works. From the

Salmon Go 2,000 Miles Upstream

"The largest of the genus, and the most magnificent of all the salmons, is the Chinook, Quinnat, King, Spring or Tyee salmon. It has an average weight of nearly 25 pounds in the Columbia and is often caught weighing 40 or 60 pounds.

"The Quinnat salmon begins to run in spring and pushes its way to the headwaters of the larger streams. In the Columbia basin the species distributes itself over 90,000 square miles of Washington, Oregon, Idaho, and Montana, its upward limit being insurmountable obstructions or falls. In the Snake river and the Yukon river, the spawning grounds lie 2,000 miles by water from the sea.

"Whether the salmon travel in streams 2,000 miles or 200 feet to reach their spawning grounds, and regardless of their physical condition, every individual or every species dies shortly after spawning.

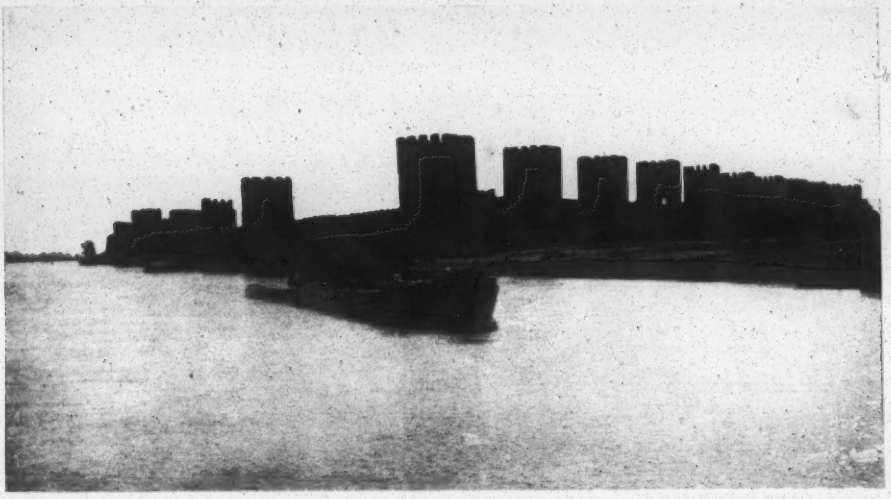
Why Salmon Die After Spawning

"The death habit of the salmons was doubtless developed to prevent the overstocking of streams, the exhaustion of the food supply of the young while in fresh water, and the consequent danger of the wiping out of species by mere excess of numbers. This wise precaution of Nature has become a positive detriment by the appearance of the human factor on the scene and the resulting destruction of a large proportion of the run of each year in practically every stream before the spawning act has occurred."

Representatives of fish life from the grim barracuda to the tiny mouse fish in our southern waters are described in "The Book of Fishes." One of the leading products of the sea coasts of United States is not a fish but the oyster, for which a place has been found in the volume. Fishermen and fishing practices are described in a chapter of life on the Grand Banks.

As a first aid to the fisherman and the student "The Book of Fishes" contains Hashime Murayama's color portraits of 92 familiar fresh and salt water fishes in addition to the numerous black and white engravings. The color plates accompany extensive biographies of the various species.

Bulletin No. 2, February 9, 1925.



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TOWERS OF AN OLD TURKISH FORTRESS ON THE DANUBE

The Danube has been a first line trench of the Balkans for centuries. Conquering tribes from the north usually met greatest resistance when they tried to cross the Danube. Rome's legions found it an obstacle on their drives north. Much of the produce of the lands along the river comes down in barges like that shown in the foreground (see Bulletin No. 1).

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Liverpool, Which Is Neglected by Sight-Seeing Travelers

LIVERPOOL, which more Americans pass through and fewer Americans see in detail than any other large city of Europe, recently dedicated a huge modern cathedral. It is built after modern theories of architecture and therefore differs markedly in appearance from the other well-known cathedrals of Europe.

Americans who have passed through Liverpool know that the city has miles and miles of docks; that the world in general unloads upon these docks vast quantities of raw materials, no mean part of which are the cargoes of grain, cattle, cotton, tobacco and meats from the United States. They also know that the busy factories of Lancashire, Yorkshire and the Midlands converge their wares upon these docks; pouring out into the world's commerce stream shiploads of woven linen, woolen and cotton, machinery and metals.

Horses and Art Objects Are the City's Pride

The flags of sixty steamship lines which ply in and out of the port were on display at the Wembley "World Fair" on Liverpool day. Two other features of Liverpool's exhibit were horses and art treasures.

The Liverpool dray horses are famous. Never ending lines of trucks drawn by these handsome, massive animals move along Liverpool's streets between docks and warehouses and railway stations. The trucks are the type known as "lorries," which originated in this city.

Annually the city has a spring carnival at which parades of the horses form a principal attraction. At Wembley one Liverpool horse is reported to have registered a pull of 21 tons and then, with a second horse, to have exceeded the capacity of the register, which was 29 tons.

"Coal-Smoked Greek Architecture"

The art treasures were from Liverpool's museum, wherein may be found a gallery of paintings, an aquarium and a public library. The most beautiful building in the city, however, is not the museum, but St. George's Hall which, even though it has been called a piece of "coal-smoked Greek architecture," is impressive for its fine, simple and dignified lines. It was the conception of a 24-year-old architect.

One of the notable collections of the museum is that of Joseph Mayer, a silversmith, and in this collection is a box of silver coins with a label. When the juvenile Joseph was walking with a relative in the fields one day a ploughman turned up several coins. The relative offered the boy a reward if he would decipher the inscriptions. The boy earned that reward and became so interested in relics of that sort that he became a distinguished antiquary.

Matches New York in Racial Variety

Liverpool once was a city of slums but, even before the World War, the city corporation began tearing down unsanitary dwellings and putting up low-price tenements for its workers. There are more than 25,000 dock workers here, and

child who drives the geese to the pond, to the patriarch who closes the gate after the oxen, each has his duties. Schools command scant attention where there is work for every hand and therefore only 40 per cent of Bessarabian men and only 5 per cent of the women are literate. The pioneer influence is further shown in Bucharest where nearly every house has land around it, unlike the wall-to-wall style of many European capitals.

The American tourist in Bessarabia at Easter time would be surprised to find the peasants coloring Easter eggs. He would be impressed by the superior color and decoration the Moldavians obtain, for they use no paper patterns, depending alone on their own ingenuity for designs. So remarkably original is much of their work that designs and colors have been used for motifs by great textile concerns.

Bulletin No. 3, February 9, 1925.

Form for Renewal of Bulletin Requests

Many requests for the GEOGRAPHIC NEWS BULLETIN were made for the year ending with this issue. If you desire the Bulletins continued kindly notify The Society promptly. The attached form may be used:

School Service Department,
National Geographic Society,
Washington, D. C.

Kindly send.....copies of the GEOGRAPHIC NEWS BULLETIN for the school year beginning with the issue of....., for classroom use, to

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The Eisteddfod, a Musical Competition

THE WELSH are reported to be protesting a recent attempt to replace their national flower, the leek, with the daffodil.

Of all the traditions cherished by Wales however none is stronger than the Eisteddfod, a distinctive and inspiring institution preserved for sixteen hundred years.

The Eisteddfodau are the famous festivals of song, music, and poetry where Welsh bards participate in contests comparable only to those of the ancient Greeks, except that the Welsh competition is exclusively intellectual and artistic, with no place for athletics on the program.

The national Eisteddfod has been held annually since 1819, in Northern Wales and Southern Wales alternately.

Vocal Music Versus Instrumental

A pretty story has survived concerning an Eisteddfod held in the sixth century, on the banks of the Conway, when a prince of Northern Wales, in order to prove the superiority of vocal music over instrumental, offered a prize to the contestants who would swim across the river and then compete. Those bards who had harps found their strings wet when they reached the scene of the competition, but the vocalists were in perfect form and won easily.

One of the spectacular feats at the Eisteddfod is the "pennillon" singing, in which the poets compose their songs after the harpist has begun his melody. Each poet in turn sings his verse, beginning two measures behind the harpist, but ending on the same measure. The contestant who is able to improvise worthy verses longest wins one of the most cherished honors of the festival.

Such contests have made the Welsh a nation of singers, and the rivalry between the various sections is such that even underground coal miners are said to rehearse their choruses for the coming Eisteddfod. And Dr. Daniel Protheroe, of Chicago (born in Ystradgynlais), a Welsh composer and conductor, is authority for the statement that immediately after the Armistice, when the Allies were celebrating the end of the war, the Welsh soldiers decided almost spontaneously upon a Festival of Song, which was held on every battlefield where there was a Welsh contingent in the line.

Musical Event Draws 18,000 Welsh

Illustrating the importance which music plays in the life of the Welshman, there was a war-time anecdote which told of eight Britons who were found in a dugout after a 12-hour bombardment. The two Irishmen were still fighting, the two Scotchmen were holding a debate, the Englishmen had not yet been introduced, but the two Welshmen were busy organizing an Oratorio Society.

At a recent Eisteddfod held in the village of Ammanford, South Wales, there were more than 18,000 spectators, including Welshmen who had returned for the occasion from the four corners of the world—from the United States, from Canada, from Australia and New Zealand, from India, Patagonia, and even the Fiji Islands.

more unskilled labor and racial strains than in any other city of England. It has an abundance of parks and many of these are partly given over to the ancient game of outdoor bowling, which flourishes here as it does nowhere else in England.

A novel sight, akin to the old-time curb market in New York, is the spot known as the "Exchange Flags" where port merchants transact much of their business during seemingly casual meetings. Liverpool also has a famous institution, "The Seaman's Orphanage," known to sea travelers because many of the great liners carry an "orphanage box" to collect funds for this institution, and some of them give entertainments for its benefit.

Geography played an unmistakable part in the fate of Liverpool. It is located 3 miles from the open sea, up the Mersey River, which widens from a width of less than a mile into a 3-mile wide basin. King John founded a town here, but even in the early eighteenth century, when its first dock was built, it had only 5,000 people. It engaged in slave traffic with the Spanish main, and played a stellar part in the romantic days of rum, sugar and tobacco smuggling. Its prosperity really began in 1840 with the establishment of regular steamship service between the Old World and the New.

Exported Immigrants of Many Lands

One of its principal articles of export to America until the time of the World War, were our immigrant citizens. It was a pioneer port of English emigration and, in addition, many of the American immigrants from Spain, France, Russia, Poland and the Baltic region embarked here.

There are nearly two-score consulates in Liverpool; that of the United States, it will be recalled, was distinguished by the service of Nathaniel Hawthorne. The Gladstone family have lived here for generations, William Ewart Gladstone was born here, and relatives still are active in the city's affairs.

Birkenhead, across the Mersey, is a busy city and would be known as an important port in its own right if it were not so close to its overshadowing neighbor. Though there is a tunnel connection the ferries between the two cities are the busiest in England.

Bulletin No. 4. February 9, 1925.

Welsh Language Preserved in Song

The choruses, solos, and contests in poetry, history, and criticism last for several days and continue from early morning until late at night.

The object of these great gatherings is to perpetuate the Welsh language, popularize Welsh literature, and afford the people the cultural advantages of good music. How effective they have been in maintaining the ancient language may be judged from the fact that Cymric is in every-day use on all railway time-tables, in shops, in churches, and other public places; for although the principality was peacefully absorbed into the realm of the Tudor sovereigns four centuries ago, eight per cent of the people of Wales and Monmouthshire speak only Welsh, while nearly a third of the inhabitants speak both Welsh and English.

Bulletin No. 5, February 9, 1925.

A GIANT POSES

© *National Geographic Society.*

One of the largest fishes of the warm seas is the Jewfish which frequently reaches 500 pounds in weight. The tendency of the lens in the eye of a fish to approach the shape of a sphere is clearly shown. The Jewfish is sluggish but very strong (see Bulletin No. 2).